IN THE CLAIMS

1. (previously presented) A system for transcoding compressed video signals, including a plurality of pictures, comprising:

a decoder to completely or partially decode an input compressed video signal;

a look-ahead estimator to gather information from said input compressed video signal and said decoder to estimate current signal characteristics of a current picture and future signal characteristics of a future incoming picture; and

an encoder to compress the reconstructed video signal according to a coding scheme derived from said current and future signal characteristics from said look-ahead estimator.

2. (canceled)

3. (previously presented) The transcoding system according to claim 1, wherein said look-ahead estimator derives a complexity of said current picture being transcoded.

4. (previously presented) The transcoding system according to claim 1, wherein said look-ahead estimator estimates a complexity of each portion of said current picture.

5. (previously presented) The transcoding system according to claim 4, wherein said portion is a slice of said current picture.

6. (previously presented) The transcoding system according to claim 4, wherein said portion is a macroblock of said current picture.

7. (previously presented) A transcoding system according to claim 3, wherein said picture complexity is estimated by a function of the total bits and the average quantization step size used to code the picture in the first coding scheme.

8. (previously presented) A transcoding system according to claim 3, wherein said picture complexity is estimated by a function of the total bits and average quantization step size used to code the portion of the picture in the first coding scheme.

9. (previously presented) A method for video transcoding, comprising:

decoding, at least partially, a compressed video signal to produce an at least partially reconstructed video signal, said compressed video signal being a data stream coded by a first coding scheme;

determining a current picture complexity for a portion of a current picture in said at least partially reconstructed video signal;

looking ahead to estimate a future picture complexity for a portion of a future picture in said at least partially reconstructed video signal;

selecting a second coding scheme based on said current picture complexity and said future picture complexity; and

encoding said current picture using said second coding scheme and said current picture complexity.

10. (previously presented) The method according to claim 9, further comprising:

determining current signal characteristics for said current picture; and

using said current signal characteristics in selecting said second coding scheme.

11. (previously presented) The method according to claim 10, further comprising:

using said current signal characteristics in encoding said current picture.

12. (canceled)

13. (currently amended) The method according to claim 9~~12~~, further comprising:

determining a future picture complexity for a portion of a future picture in said at least partially reconstructed video signal; and

using said future picture complexity in selecting said second coding scheme;

using said future picture complexity in encoding said current picture.

14. (currently amended) The method according to claim 9~~12~~, further comprising:
determining a future picture complexity for a portion of a future picture in said at least partially reconstructed video signal; and
using said future picture complexity in selecting said second coding scheme;
determining future signal characteristics for said future picture; and
using said future signal characteristics in selecting said second coding scheme.

15. (currently amended) The method according to claim 14, further comprising:
using said future signal characteristics in encoding said current picture.

16. (currently amended) The method according to claim 9~~12~~, wherein said portion of said future picture is a slice.

17. (currently amended) The method according to claim 9~~12~~, wherein said portion of said future picture is a macroblock.

18. (previously presented) The method according to claim 17, further comprising:
determining a macroblock complexity for said macroblock; and
using said macroblock complexity in selecting said second coding scheme.

19. (previously presented) The method according to claim 18, further comprising:
using said macroblock complexity in encoding said current picture.

20. (previously presented) The method according to claim 9, wherein said current picture complexity is determined by a function of total bits and an average quantization step size used to code said data stream.

21. (currently amended) The method according to claim 9~~12~~, further comprising:

determining a future picture complexity for a portion of a future picture in said at least partially reconstructed video signal; and

using said future picture complexity in selecting said second coding scheme;

wherein said future picture complexity is determined by a function of total bits and an average quantization step size used to code said data stream.

22. (previously presented) The method according to claim 18, wherein said macroblock complexity is determined by a function of total bits and an average quantization step size used to code said data stream.

23. (previously presented) The method according to claim 9, wherein said current picture complexity is determined by a function of total bits and an average quantization step size used to code said portion.

24. (currently amended) The method according to claim 9~~12~~, further comprising:

determining a future picture complexity for a portion of a future picture in said at least partially reconstructed video signal; and

using said future picture complexity in selecting said second coding scheme;

wherein said future picture complexity is determined by a function of total bits and an average quantization step size used to code said portion.

25. (previously presented) The method according to claim 18, wherein said macroblock complexity is determined by a function of total bits and an average quantization step size used to code said macroblock.